

*Prepared Statement to the Michigan House Judiciary Committee on a Hearing Regarding HB 4616 (Meisner)*

November 7, 2007

Mr. Chairman, Honorable Committee Members...

I'm Dr. Stephen Rapundalo, Executive Director of MichBio, the state's life sciences and biotechnology industry association, representing over 230 companies, research institutions and related life science organizations.

This morning I'd like to address the issue of stem cell research from an economic impact and development perspective.

First though, let me begin by telling you that the Board of Directors of MichBio by majority vote in August 2007 adopted the following policy statement regarding this issue –

*The Michigan Biotechnology Industry Association (MichBio), reflecting the majority opinion of respondents to a member survey, supports federal and state policies that permit use of embryonic stem cells and somatic cell transfer in research including public funding for such research within a framework of scientific, ethical, legal and practical guidelines. Furthermore, MichBio supports laws and governmental policies that prohibit human reproductive cloning. In making this statement MichBio acknowledges the strong differing opinions on this topic as well as the government's role in not legislating ethics but enabling scientific freedom in a prudent legal framework.*

With this statement we join organizations like the National Academy of Sciences, American Association for the Advancement of Science, the Michigan State Medical Society, our parent organization BIO, numerous sister state biotech associations, and many other state and national entities in advocating for easing of restrictions on embryonic stem cell research.

Why should such a position be important for Michigan and especially its economy? In simple terms, any restriction on scientific freedom generates uncertainty among researchers, entrepreneurs and investors. Biotechs look closely at regional and local government policies and level of business risk, in other words, signs of a positive or hostile business environment. Rightly or wrongly those perceptions motivate entrepreneurs and investors to set up shop in certain locations over others, with broad economic implications. Emerging biotech firms will seek out other more favorable locations as agglomeration economies and the intellectual and commercial synergies associated with proximity to others in the industry attract new start ups. It's about being a magnet for talent, research funding and venture capital.

Perceptions are reality; investor psychology is important. Currently, Michigan is viewed as having laws that are unpredictable and antagonistic to the research environment, that we are being close-minded and restrictive, instead of progressive and supportive. It's precisely this kind of perception that will prevent Michigan from reaching the upper tier of states viewed as being leaders in the life sciences and biotechnology sector.

Economic studies show, beyond a doubt, that technological change is the major driving force for sustained economic growth and rising living standards. In recent years, numerous states, including New Jersey, California, Maryland, Wisconsin, Illinois, New York, North Carolina, Missouri, Massachusetts, and even Rhode Island, have taken steps to change their policies and make it easier for stem cell research, both adult and

embryonic, to be conducted and funded. A voter-approved initiative in California, Proposition 71, is investing \$3 billion in public funds to support stem cell research, New Jersey directed \$50 million towards a stem cell institute as part of a \$720 million investment in stem cell research over 10 years, and Massachusetts announced in May 2007 that \$1 billion in funding over 10 years would be made available in part to establish stem cell banks. In turn, this has already resulted in the attraction of scientific talent and entrepreneurs, establishment of new biotechnology firms, and most importantly, has raised the competitiveness of those states in the intellectual marketplace.

The actual economic value of allowing embryonic stem cell research is potentially large, but speculative, mostly due to the nascent character of the early stem cell research field. However, a number of recent analyses have addressed the potential economic impacts of either investment in or prohibition of stem cell research.

One way economic activity can increase is by expanding research activities and associated personnel within the state either directly in stem cell research or in other biomedical fields. A California study<sup>1</sup> estimated that the total economic impact for every \$1.00 invested in stem cell research could mean \$2.18 in new direct economic activity, not to mention the hundreds of millions of dollars in tax revenue, royalty payments, and creation of new jobs. Furthermore, the study projected that creation of just 5 new 50-person firms and 8 new university research labs could mean more than \$500 million gained over 10 years. After a lengthy period of litigation to overturn Proposition 71, California won the right to spend its \$3 billion in public funds and has already begun to see positive outcomes by way of new lab infrastructure, recruitment of new faculty, researchers, and staff, and resulting tax revenues and other economic spillover.

A New Jersey economic impact report<sup>2</sup> and its recent update<sup>3</sup> projected that over 30,000 job-years would be created and \$2.2 billion in economic activity generated including \$115 million in state revenues. Of course, these estimates didn't include economic impact through any ancillary leveraged funding.

On the flip side, a Missouri assessment<sup>4</sup> last year estimated that by 2030 the cumulative present value of Missouri's real Gross State Product would be \$1.65 billion lower than it would otherwise be without considering a 5% negative spillover effect of a continued ban on early stem cell research. Similarly, the cumulative present value of state general revenue would be reduced directly by \$63 million over the same time period, not including any multiplier losses.

How quickly can an economic impact be realized following a change in embryonic stem cell policy? A year ago, after a contentious battle, Missouri became the first in the nation to pass a constitutional amendment protecting embryonic stem cell research – no state funding was appropriated for stem cell research. Since then opponents have consistently been chipping away legislatively at the measure to overturn it. One result – the Stowers Institute for Medical Research – some call it a Taj Mahal of science, despite having cutting-edge labs and an endowment of \$2 billion has found it difficult to recruit top scientists, and in August 2007 canceled

<sup>1</sup> L. Baker and B. Deal. *Some Economic Implications of State Stem Cell Funding Programs*. <http://www.nyas.org/ebriefs/ebrief/000440/pdfs/Baker.pdf>, 2005.

<sup>2</sup> J.J. Seneca and W. Irving. *The Economic Benefits of the New Jersey Stem Cell Research Initiative*. <http://policy.rutgers.edu/news/press/stemcell.pdf>, 2005.

<sup>3</sup> J.J. Seneca and W. Irving. *Updated Economic Benefits of the New Jersey Stem Cell Capital Projects and Research Bond Acts*. <http://www.policy.rutgers.edu/reports/other/stemcelloct07.pdf>, 2007.

<sup>4</sup> J.H. Haslag and B.K. Long. *The Missouri Stem Cell Research and Cures Initiative: An Economic and Health Care Analysis*. [http://www.missouricures.com/documents/Analysis\\_091406.pdf](http://www.missouricures.com/documents/Analysis_091406.pdf), 2006.



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plans for a major \$300 million expansion. The research institute also moved a large portion of its endowment to Delaware, calling the political climate in Missouri too hostile for investment.

The sad truth for Michigan is that we don't even get a glance due to our present restrictive statutes regarding stem cell research – academic scientists, entrepreneurs, biotechs and investors simply pass us by on their way to states that support cutting-edge scientific discovery – we are simply not taken seriously. Over the longer term such a prevailing policy will have an inevitable negative impact on the state's economy and could have a chilling effect on other types of research that require a stable regulatory environment. Michigan simply cannot afford to stay out of the game anymore.

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